

EDUCATION

06/2013-05/2020	Ph.D. in Electrical and Computer Engineering Advisor: David S. Ebert Thesis title: Visual analytics for decision making in performance evaluation	Purdue University, West Lafayette, IN, USA
09/2011-05/2013	M.S. in Computer Science Advisor: Remco Chang Master project: Modeling user interactions for complex visual search tasks	Tufts University, Medford, MA, USA
09/2010-06/2011	M.S. Candidate in Computer Science & Technology	Zhejiang University of Technology, China
09/2006-06/2010	Bachelor of Engineering in Software Engineering Thesis title: Natural scene construction and rendering of rain and snow	

PROFESSIONAL EXPERIENCE

08/2023-present	Augusta University Tenure-Track Assistant Professor School of Computer and Cyber Sciences	Augusta, GA, USA
05/2025-07/2025	Purdue University Visiting Assistant Professor Department of Computer Graphics Technology	West Lafayette, IN, USA
07/2020-06/2023	Arizona State University, VADER Lab Postdoc Research Associate with Dr. Ross Maciejewski School of Computing and Augmented Intelligence	Tempe, AZ, USA

HONORS AND AWARDS

2025	Award for Expressive Design, VAST Challenge Design Challenge, IEEE
2025	Award for Comprehensive Treatment of Time, VAST Challenge MC1, IEEE
2020	Award for Effectively Transforming Task Decomposition into Conceptual Design, VAST Challenge MC3, IEEE
2015	Honorable Mention for Compelling Narrative Debrief, VAST Challenge MC2, IEEE
2010	Excellent Graduate awarded by Zhejiang Provincial Higher Education Council
2007, 2008, 2009	Excellent Student Scholarship awarded by Zhejiang University of Technology
2008	Outstanding Student awarded Zhejiang University of Technology

TEACHING EXPERIENCE

Augusta University (Evaluation Score is the average of “Instructor” items out of 5.0)

Spring 2026	“Biomedical Visualization” BMSE 2201	1 student	
Spring 2026	“Undergraduate Research” CSCI 4990	1 student	
Fall 2025	“Computer Graphics” CSCI 4820	8 student	
Spring 2025	“Biomedical Visualization” BMSE 2201	1 student	
Spring 2025	“Data Visualization” CSCI 8510	2 students	
Fall 2024	“Data Visualization” CSCI 4950/6950	3 students	
Spring 2024	“Computer Graphics” CSCI 4820	18 students	Student Evaluation: 4.46 (16/18)

Arizona State University

Summer 2021 Mentor for five high school students in the seven-week VADER Lab summer research camp

Purdue University	
2018, 2019, 2020	Graduate Mentor for three students who received scholarships from Purdue's Discovery Park Undergraduate Research Internship (DURI) Program
Fall 2018	Teaching Assistant for "Introduction to Visual Analytics" ECE695D
2014, 2016, 2017	Graduate Mentor for three students in the Summer Undergraduate Research Fellowship (SURF) internship
2015-2020	Graduate Mentor for eleven undergraduate students participating in the Vertically Integrated Projects (VIP)

Tufts University	
Spring 2012	Teaching Assistant for "Introduction to Programming for Business" COMP10

PUBLICATIONS

Journal Papers (peer-reviewed)

Note : Bold text indicates Augusta University students under mentorship at the time of publication.

- J14. Y. Wang, J. Zhao, Y. Ba, M. V. Mancenido, E. K. Chiou, and R. Maciejewski. Impact of EXplainable AI on trust evolution with AI error severity: Comparing similar instances and saliency map in a baggage screening task. *International Journal of Human-Computer Interaction*, 31 pages, Oct. 2025. doi : [10.1080/10447318.2025.2564272](https://doi.org/10.1080/10447318.2025.2564272)
- J13. J. Liu, J. Zhang, S. Yang, J. Xiang, X. Wang, J. Zhao, Z. Yang, and J. Zhao. Towards general-purpose video reconstruction through synergy of grid-splicing diffusion and large language models. *IEEE Transactions on Circuits and Systems for Video Technology*, 13 pages, 2025. Early Access. doi : [10.1109/TCSVT.2025.3545795](https://doi.org/10.1109/TCSVT.2025.3545795)
- J12. F. Zhu, X. Zhu, X. Wang, Y. Ma, and J. Zhao. ATVis: Understanding and diagnosing adversarial training processes through visual analytics. *Visual Informatics*, 8(4):71–84, Dec. 2024. doi : [10.1016/j.visinf.2024.10.003](https://doi.org/10.1016/j.visinf.2024.10.003)
- J11. Y. Wang, J. Zhao, J. Hong, and R. M. Ronald G. Askin. A simulation-based approach for quantifying the impact of interactive label correction for machine learning. *IEEE Transactions on Visualization and Computer Graphics*, 31(9):5687–5703, Sept. 2025. doi : [10.1109/TVCG.2024.3468352](https://doi.org/10.1109/TVCG.2024.3468352)
- J10. P. Salehi, Y. Ba, N. Kim, A. Mosallanezhad, A. Pan, M. C. Cohen, Y. Wang, J. Zhao, S. Bhatti, J. Sung, E. Blasch, M. V. Mancenido, and E. K. Chiou. Towards trustworthy AI-enabled decision support systems: Validation of the multisource AI scorecard table (MAST). *Journal of Artificial Intelligence Research*, 80:1311–1341, Aug. 2024. doi : [10.1613/jair.1.14990](https://doi.org/10.1613/jair.1.14990)
- J9. R. Hnatyshyn, J. Zhao, D. Perez, J. Ahrens, and R. Maciejewski. MolSieve: A progressive visual analytics system for molecular dynamics simulations. *IEEE Transactions on Visualization and Computer Graphics*, 30(1):727–737, Jan. 2024. doi : [10.1109/TVCG.2023.3326584](https://doi.org/10.1109/TVCG.2023.3326584)
- J8. J. Zhao, Y. Wang, M. V. Mancenido, E. K. Chiou, and R. Maciejewski. Evaluating the impact of uncertainty visualization on model reliance. *IEEE Transactions on Visualization and Computer Graphics*, 30(7):4093–4107, July 2024. doi : [10.1109/TVCG.2023.3251950](https://doi.org/10.1109/TVCG.2023.3251950)
- J7. A. Reinert, L. S. Snyder, J. Zhao, A. S. Fox, D. F. Hougen, C. Nicholson, and D. S. Ebert. Visual analytics for decision-making during pandemics. *Computing in Science & Engineering*, 22(6):48–59, Nov. 2020. doi : [10.1109/MCSE.2020.3023288](https://doi.org/10.1109/MCSE.2020.3023288)
- J6. J. Zhao, M. Karimzadeh, L. S. Snyder, C. Surakitbanharn, Z. C. Qian, and D. S. Ebert. MetricsVis: A visual analytics system for evaluating employee performance in public safety agencies. *IEEE Transactions on Visualization and Computer Graphics*, 26(1):1193–1203, Jan. 2020. doi : [10.1109/TVCG.2019.2934603](https://doi.org/10.1109/TVCG.2019.2934603)
- J5. M. Khayat, M. Karimzadeh, J. Zhao, and D. S. Ebert. VASSL: A visual analytics toolkit for social spambot labeling. *IEEE Transactions on Visualization and Computer Graphics*, 26(1):874–883, Jan. 2020. doi : [10.1109/TVCG.2019.2934266](https://doi.org/10.1109/TVCG.2019.2934266)
- J4. L. Tay, V. Ng, A. Malik, J. Zhang, J. Chae, D. S. Ebert, Y. Ding, J. Zhao, and M. Kern. Big data visualizations in organizational science. *Organizational Research Methods*, 21(3):660–688, July 2018. doi : [10.1177/1094428117720014](https://doi.org/10.1177/1094428117720014)
- J3. Y. L. Wong, J. Zhao, and N. Elmqvist. Evaluating social navigation visualization in online geographic maps. *International Journal of Human-Computer Interaction*, 31(2):118–127, Feb. 2015. doi : [10.1080/10447318.2014.959106](https://doi.org/10.1080/10447318.2014.959106)
- J2. S. Ko, J. Zhao, J. Xia, S. Afzal, X. Wang, G. Abram, N. Elmqvist, L. Kne, D. Van Riper, K. Gaither, S. Kennedy, W. Tolone, W. Ribarsky, and D. S. Ebert. VASA: Interactive computational steering of large asynchronous simulation pipelines for societal infrastructure. *IEEE Transactions on Visualization and Computer Graphics*, 20(12):1853–1862, Dec. 2014. doi : [10.1109/TVCG.2014.2346911](https://doi.org/10.1109/TVCG.2014.2346911)
- J1. E. T. Brown, A. Ottley, H. Zhao, Q. Lin, R. Souvenir, A. Endert, and R. Chang. Finding Waldo: Learning about users from their interactions. *IEEE Transactions on Visualization and Computer Graphics*, 20(12):1663–1672, Dec. 2014. doi : [10.1109/TVCG.2014.2346575](https://doi.org/10.1109/TVCG.2014.2346575)

Conference Papers (peer-reviewed)

- C11. A. Taheritajar, J. Zhao, and J. Orlosky. Augmented reality visual retrieval for object detection and corpus-guided content generation. In *Proceedings of the IEEE International Conference on Artificial Intelligence and eXtended and Virtual Reality*, AlxVR 2026, 8 pages. IEEE, Los Alamitos, Jan. 2026

- C10. A. Taheritajar, J. Benson, A. Gibson, B. Wilburn, J. Zhao, and J. Orlosky. Scalable object detection in mixed reality using incremental re-training and one-shot 3D annotation. In *Proceedings of the IEEE International Symposium on Mixed and Augmented Reality*, ISMAR 2025, pp. 582–592. IEEE, Los Alamitos, Oct. 2025. doi : [10.1109/ISMAR67309.2025.00040](https://doi.org/10.1109/ISMAR67309.2025.00040)
- C9. D. R. Roy, J. Zhao, S. Pan, and S. Fang. Towards understanding user privacy concerns of internet of things sensor data. In *Proceedings of the International Workshop on Security and Privacy of Sensing Systems*, Sensors S&P '25, 5 pages. ACM, New York, May 2025. doi : [10.1145/3722566.3727627](https://doi.org/10.1145/3722566.3727627)
- C8. H. Chen, G. Xu, A. Zhou, Z. Wang, J. Zhao, and S. Fang. Adaptive dynamic digital twin for test scenario generation. In *Proceedings of the IEEE International Conference on Mobility : Operations, Services, and Technologies*, MOST 2025, 12 pages, May 2025. doi : [10.1109/MOST65065.2025.00024](https://doi.org/10.1109/MOST65065.2025.00024)
- C7. L. Snyder, J. Zhao, A. Reinert, G. Wang, and D. Ebert. PanViz 2.0: AI-driven visual analytics to adapt to the novel challenges of COVID-19. In *Proceedings of the Hawaii International Conference on System Sciences*, HICSS-54, pp. 1457–1465. ScholarSpace, Jan. 2021. doi : [10.24251/HICSS.2021.176](https://doi.org/10.24251/HICSS.2021.176)
- C6. J. Zhao, M. Karimzadeh, H. Xu, A. Malik, S. Afzal, G. Wang, N. Elmqvist, and D. S. Ebert. Route Packing: Geospatially-accurate visualization of route networks. In *Proceedings of the Hawaii International Conference on System Sciences*, HICSS-53, pp. 1370–1379. ScholarSpace, Jan. 2020. doi : [10.24251/HICSS.2020.168](https://doi.org/10.24251/HICSS.2020.168)
- C5. J. Zhao, M. Karimzadeh, A. Masjedi, T. Wang, X. Zhang, M. M. Crawford, and D. S. Ebert. FeatureExplorer: Interactive feature selection and exploration of regression models for hyperspectral images. In *Proceedings of the IEEE Visualization Conference*, VIS 2019, pp. 161–165. IEEE, Los Alamitos, Oct. 2019. doi : [10.1109/VISUAL.2019.8933619](https://doi.org/10.1109/VISUAL.2019.8933619)
- C4. A. Masjedi, J. Zhao, A. M. Thompson, K. Yang, J. E. Flatt, M. M. Crawford, D. S. Ebert, M. R. Tuinstra, G. Hammer, and S. Chapman. Sorghum biomass prediction using UAV-based remote sensing data and crop model simulation. In *Proceedings of the IEEE International Geoscience and Remote Sensing Symposium*, IGARSS 2018, pp. 7719–7722. IEEE, Los Alamitos, July 2018. doi : [10.1109/IGARSS.2018.8519034](https://doi.org/10.1109/IGARSS.2018.8519034)
- C3. Z. Zhang, A. Masjedi, J. Zhao, and M. M. Crawford. Prediction of sorghum biomass based on image based features derived from time series of UAV images. In *Proceedings of the IEEE International Geoscience and Remote Sensing Symposium*, IGARSS 2017, pp. 6154–6157. IEEE, Los Alamitos, July 2017. doi : [10.1109/IGARSS.2017.8128413](https://doi.org/10.1109/IGARSS.2017.8128413)
- C2. J. Zhao, A. Malik, H. Xu, G. Wang, J. Zhang, C. Surakitbanharn, and D. S. Ebert. MetricsVis: A visual analytics framework for performance evaluation of law enforcement officers. In *Proceedings of the IEEE International Symposium on Technologies for Homeland Security*, HST 2017, 7 pages. IEEE, Los Alamitos, Apr. 2017. doi : [10.1109/THS.2017.7943468](https://doi.org/10.1109/THS.2017.7943468)
- C1. S. K. Badam, J. Zhao, S. Sen, N. Elmqvist, and D. Ebert. TimeFork: Interactive prediction of time series. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, CHI '16, pp. 5409–5420. ACM, New York, May 2016. doi : [10.1145/2858036.2858150](https://doi.org/10.1145/2858036.2858150)

Posters (peer-reviewed)

- P12. S. Qaiser, J. Zhao, N. Khanal, Q. Yang, S. C. Chen, H. J. Liu, H. Y. Zong, Y. V. Chen, and C. Z. Qian. BlossomNet: Visualizing influence and community evolution with floral glyphs in large person-centric knowledge graphs. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, 2 pages. IEEE, Los Alamitos, Nov. 2025 **VAST Challenge 2025 DC Award for Expressive Design ★**
- P11. H. Y. Zong, N. Khanal, Q. Yang, S. Qaiser, S. C. Chen, H. J. Liu, C. Z. Qian, Y. V. Chen, and J. Zhao. Melody Way: Visualizing influence, collaboration, and genre evolution in the music industry. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, 2 pages. IEEE, Los Alamitos, Nov. 2025 **VAST Challenge 2025 MC1 Award for Comprehensive Treatment of Time ★**
- P10. D. R. Roy, J. Zhao, S. Pan, and S. Fang. PrivacyVis: Interactive visualization tool for privacy risks of internet of things sensors. In *Proceedings of the ACM Conference on Embedded Networked Sensor Systems*, SenSys '25, p. 628–629. ACM, New York, May 2025. doi : [10.1145/3715014.3724041](https://doi.org/10.1145/3715014.3724041)
- P9. C. Guo, J. Zhao, L. Ding, T. Zhang, W. Deng, P. Owusu Attah, X. Guo, X. T. Nguyen, Y. Ju, Z. C. Qian, and Y. V. Chen. ConstellationBuilder: A high-level situational awareness and team assembly interface for cybersecurity events. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, 2 pages. IEEE, Los Alamitos, Oct. 2020 **VAST Challenge 2020 MC3 Award for Effective Transformation of Task Decomposition into Conceptual Design ★**
- P8. W. Hatton, J. Zhao, M. B. Gorantla, J. Chae, B. Ahlbrand, H. Xu, S. Chen, G. Wang, J. Zhang, A. Malik, S. Ko, and D. S. Ebert. Visual analytics for detecting communication patterns. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 137–138. IEEE, Los Alamitos, Oct. 2015. doi : [10.1109/VAST.2015.7347648](https://doi.org/10.1109/VAST.2015.7347648) **VAST Challenge 2015 MC2 Honorable Mention for Compelling Narrative Debrief ★**
- P7. J. Zhao, G. Wang, J. Chae, H. Xu, S. Chen, W. Hatton, S. Towers, M. B. Gorantla, B. Ahlbrand, J. Zhang, A. Malik, S. Ko, and D. S. Ebert. ParkAnalyzer: Characterizing the movement patterns of visitors VAST 2015 mini-challenge 1. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 179–180. IEEE, Los Alamitos, Oct. 2015. doi : [10.1109/VAST.2015.7347669](https://doi.org/10.1109/VAST.2015.7347669)

- P6. J. Chae, G. Wang, B. Ahlbrand, M. B. Gorantla, J. Zhang, S. Chen, H. Xu, J. Zhao, W. Hatton, A. Malik, S. Ko, and D. S. Ebert. Visual analytics of heterogeneous data for criminal event analysis VAST challenge 2015: Grand challenge. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 149–150. IEEE, Los Alamitos, Oct. 2015. doi : [10.1109/VAST.2015.7347654](https://doi.org/10.1109/VAST.2015.7347654)
- P5. S. K. Badam, J. Zhao, N. Elmquist, and D. S. Ebert. TimeFork: Mixed-initiative time-series prediction. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 223–224. IEEE, Los Alamitos, Oct. 2014. doi : [10.1109/VAST.2014.7042501](https://doi.org/10.1109/VAST.2014.7042501)
- P4. J. Zhang, S. Afzal, D. Breunig, J. Xia, J. Zhao, I. Sheeley, J. Christopher, D. S. Ebert, C. Guo, S. Xu, J. Yu, Q. Wang, C. Wang, Z. Qian, and Y. Chen. Real-time identification and monitoring of abnormal events based on microblog and emergency call data using SMART. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 393–394. IEEE, Los Alamitos, Oct. 2014. doi : [10.1109/VAST.2014.7042582](https://doi.org/10.1109/VAST.2014.7042582)
- P3. J. Xia, J. Zhao, I. Sheeley, J. Christopher, Q. Wang, C. Guo, J. Zhang, D. S. Ebert, Y. V. Chen, and Z. C. Qian. AnnotatedTimeTree: Visualization and annotation of news text and other heterogeneous document collections. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 337–338. IEEE, Los Alamitos, Oct. 2014. doi : [10.1109/VAST.2014.7042554](https://doi.org/10.1109/VAST.2014.7042554)
- P2. C. Guo, J. Xia, J. Yu, J. Zhao, J. Zhang, Q. Wang, Z. C. Qian, Y. V. Chen, C. Wang, and D. Ebert. AnnotatedTimeTree, Dodeca-Rings Map & SMART: A geo-temporal analysis of criminal events. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 303–304. IEEE, Los Alamitos, Oct. 2014. doi : [10.1109/VAST.2014.7042538](https://doi.org/10.1109/VAST.2014.7042538)
- P1. J. Zhao, Q. Lin, A. Ottley, and R. Chang. Modeling user interactions for complex visual search tasks. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, 2 pages. IEEE, Los Alamitos, Oct. 2013

Book Chapter

- B1. M. Karimzadeh, J. Zhao, G. Wang, L. S. Snyder, and D. S. Ebert. Human-guided visual analytics for big data. In *Big Data in Psychological Research*, pp. 145–177. American Psychological Association, Washington, Jan. 2020. doi : [10.1037/0000193-008](https://doi.org/10.1037/0000193-008)

PROFESSIONAL SERVICE

Program Committee Member

- The Eurographics Conference on Visualization (EuroVis) Full Papers 2025, 2026
 The IEEE Conference on Visualization & Visual Analytics Short Papers (IEEE VIS Short Papers 2025)
 The International Symposium on Visual Information Communication and Interaction (VINCI 2025)
 Visualization Notes Track of PacificVis 2023-present

Journal Reviewer

- IEEE Transactions on Visualization and Computer Graphics
 Computer Graphics Forum
 IEEE Computer Graphics and Applications
 Applied Ergonomics
 IEEE Transactions on Systems, Man and Cybernetics : Systems
 Visual Informatics
 ACM Transactions on Intelligent Systems and Technology

Conference Reviewer

- The IEEE conference on AI and Extended & Virtual Reality (AIxVR 2026)
 The ACM Conference on Human Factors in Computing Systems (CHI 2026)
 The IEEE Conference on Visualization & Visual Analytics (IEEE VIS 2021, 2022, 2023, 2025)
 The IEEE Conference on Visual Analytics Science and Technology (IEEE VAST 2018, 2019, 2020)
 The Eurographics Conference on Visualization (EuroVis 2019)
 The IEEE Pacific Visualization Symposium (PacificVis 2020, 2021, 2023, 2024 journal track)
 Hawaii International Conference on System Sciences (HICSS-53, 54, 55, 57, 58, 59)
 The IEEE VAST Challenge Contest (2015, 2019, 2020, 2021)

Conference Organization

- IEEE VIS 2024 Panel Organizer: *20 Years of Visual Analytics*
 IEEE VIS 2022 Session Chair
 IEEE VIS 2019 Student Volunteer

Proposal Review Service

- NSF Reviewer 2025

DEPARTMENT SERVICE

Augusta University

Fall 2025	Organizing Committee Vice-Chair, <i>AI in Research and Education (AIRE 2025) Workshop</i>
Spring 2025	Search Committee Member, Data Science Faculty Search, School of Computer and Cyber Sciences
10/2023-present	Faculty Mentor, Women in CyberSecurity (WiCyS) Student Chapter

MENTORING

PhD Students

Shichen Gao (08/2024-present, major-advisor)
Alireza Taheritajar (05/2024-present, co-advisor)

Undergraduate Research Assistantship

Justin Hardee (12/2024-05/2025)

Comprehensive Exam Committee

Shuaizheng Lu (11/2025)
Katrina Visintainer (11/2025)
Lynsey Steinberg (11/2024)